



Missouri S&T Magazine, September-October 1951

Miner Alumni Association

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MSM ALUMNUS

Missouri School of Mines and Metallurgy
ROLLA, MO.

VOLUME 25

SEPTEMBER-OCTOBER :: 1951

NUMBER 5

Miners' Immortal 1914 Football Champions



Top row, left to right: W. H. Saunders, coach; C. F. Copley, J. G. Wilson, Earl Freeman, H. D. Kline.

Middle row: E. H. Long, J. L. Imlay, W. H. Askew, W. O. Brandenberger.

Bottom row: W. W. Kiskaddon, R. L. Mountjoy, W. H. McCartney.

Turn to Pages 4 and 5 for Coach Saunders' own story on this miracle team which scored 544 points to 0 for their opponents.

450 High School Students Attracted by MSM Exhibits on Engineers' Day, Oct. 5

Engineers Day at the Missouri School of Mines and Metallurgy was attended by 450 high school students, from throughout the State of Missouri on Friday, October 5, who came from as far away as Independence in the Northwest and Eminence in the Southeast and many from the St. Louis Area.

Professor E. W. Carlton, Civil Engineering Department, was Chairman of the Engineers Day Committee. All Departments of the school had numerous demonstrations and exhibits for the high school students to see. The students were invited to attend the Engineers Day activities by Dean Curtis L. Wilson and to visit the engineering laboratories to observe personally many engineering practices and experiments that are not available in their own classrooms.

Students Much Interested

From the amount of head scratching that went on during the demonstrations, it was apparent that the students were much interested. Instructors and students were present at all exhibits to explain principles involved during demonstrations and answer questions about the many products from school laboratories and those contributed by various manufacturing companies.

The mouse trap "atomic bomb", explained and demonstrated by Dr. Harold Q. Fuller, head of the Physics Department, proved to be very popular among the students as did Professor Jensen's jumping metal ring from the magnetic induction coil and the light bulb in a beaker of water that burned brilliantly when brought near the coil.

Professor I. H. Lovett's television exhibit in the Electrical Department stole the show for a time while a World Series game was on. Before and after the game the students watched a HF induction heating unit cook a hamburger in 15 seconds. They were also able to "see" their voice as well as hear it and to see the vibrations of the well known "wolf whistle" so aptly demonstrated by Professor Gabriel Skitek.

Uranium ores were displayed in Dr. O. R. Grawe's Geology Department with a geiger counter to which the students listened. Here also were slices of rock thinner than paper. The Geology Museum was open where scores of minerals and ores were on display, many of them placed under powerful microscopes where the structures magnified thousands of times could be studied. Fluorescent minerals that look like ordinary rocks in daylight were placed in fluorescent light to show all the colors of the rainbow. The C. L. Dake Geolog-

See pictures of students on Pages 10 and 11, and of banquet on Page 20.

ical Society presented a map of Missouri and a fossil display with streamers showing the location from where the various specimens had been taken.

The rare metals zirconium and titanium and other minerals were displayed in the Metallurgical Department. Numerous ceramic products were displayed in the Ceramics Department. Of especial interest was an automobile window glass used as a door mat, supported at either end, that snapped back like a steel spring after having been stepped on.

Civil Engineering Display

A working model of flood gates and a scale model of the Harlan County, Nebraska dam, one of the Missouri Valley flood control projects, was on display in the Civil Engineering Department and furnished by the U. S. Corps of Engineers. The water spigot disconnected from any water main, suspended in midair by a thin wire and running a full stream of water attracted much attention. A miniature distillation plant was in operation; samples of water were placed on slides under the microscope to show specimens of "bugs" in contaminated water.

Laboratories in the Chemical and Mechanical Engineering Departments were in operation where students were carrying out various

experiments. The Chemical Engineering Department demonstrated a CO-two fire extinguisher by smothering out a fire of kerosene soaked asbestos in two seconds. An experimental cold room in the Mechanical Engineering Department, refrigerated by steam, was demonstrated where temperatures can be reduced to 150° F below zero by using freon 22.

Many of the demonstrations appeared mysterious to the students but many of the principles were explained so that they could see how they were applied to our complex civilization of today. In the hands of the trained engineer the students could see that the complicated appeared simple and easy. High school students interested in a technical education were able to see many demonstrations which they normally only read about but can not see.

The exhibits and demonstrations were retained until the next day, Saturday, October 6, when 400 parents came to visit the school. In the afternoon they stayed to watch the defending MIAA Conference Champion Miners win their first conference football game of the season by beating the Warrensburg Mules 12 to 6 on a wet muddy field.

Cousin of Late Director Charles H. Fulton Dies

Chester A. Fulton, 302 Somerset Road, Baltimore, Maryland, Consulting Mining Engineer, President of the American Institute of Mining and Metallurgical Engineering, 1944, died August 16.

Mr. Fulton was a cousin of the late Dr. Charles H. Fulton, Director of Missouri School of Mines and Metallurgy for over 17 years.

Chester Fulton's experience embraced a wide area of activities since he graduated from Columbia University in 1906. This includes professional work in Mexico, Venezuela, Cuba, and this country. He was well known in recent years for his contributions to the phosphate industry in general and to the Southern Phosphate Corporation, Baltimore, Maryland of which he was president.

He will be remembered for his outstanding professional ability and a general radiating personality.

President's Column

Inasmuch as this issue of the *Alumnus* will be out so near Homecoming time, an invitation from me to all alumni and former students to attend that event would be somewhat belated. I do, however, extend a most hearty welcome on behalf of the Board of your Alumni Association to all of you who are returning to the Campus for the occasion.

To those of the "One" and "Six" classes from 1901 to 1946 who will be here, there is a particular welcome. The Homecoming weekend is now well established as the time for class reunions, and following the customary pattern at many colleges and universities it is fitting that we return as each fifth increment to the anniversary of our graduation comes around—all too soon! I will be back for my Thirty-fifth.

For some of us, because of business, alumni activity, family and marital ties or just plain sentiment, the return path to MSM and Rolla is well beaten. We are familiar with the changes that have taken place in "Town and Gown" over the intervening years. You less frequent visitors are due for many surprises. By means of the *Alumnus* an attempt has been made to keep you informed as to progress on the Campus. You will find even more changes in Rolla itself. Because of nostalgia for the "good old days" you may not approve of all of them. There will be that unescapable feeling of sadness over the absence of familiar faces among the Faculty members or among former good friends in town and there will be regrets over the absence of a classmate who could have but did not return.

It all adds up, however, to growth and advancement. I want at this point to pay tribute to the one who is responsible for so much of the progress you will see on the Campus. This Homecoming marks the Tenth Anniversary of the tenure of office of Dean Curtis Laws Wilson, and it is to him that I refer. Throughout the 80-year history of MSM the number of his years of office has been exceeded by only two of its thirteen titular heads. A

third has just equalled it. About three-quarters of all our living graduates have received their degrees since Dean Wilson has been here, so he will be no stranger to most of you. I suggest that most of you old "grads" make his acquaintance if you have not already done so. His fine record is there for all of you to read.

Again welcome! Attend the many events which enthusiastic and hard-working committees have planned for your enjoyment, and come to



FABIAN BACHRACH PHOTO

James L. Head

the Convocation on Saturday morning. Keep out of as much trouble as possible, but if you are the rugged type who insists in meeting it more than half way, there should be enough former friends around town to get you out. Pay your 1951-52 Association dues while you are here. It would please "Cap" Hanley no end and save him considerable trouble and expense.

Finally, your Alumni President hopes to meet and greet each of you personally.

"BEAT CAPE GIRARDEAU"

Cordially yours,
James L. Head, '16

MSM ALUMNUS

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New Alumni Board Members Elected

New members of the Board of Directors of the M.S.M. Alumni Association as a result of the election just closed, show that Col. T. C. Gerber, '28, was elected for the Area No. 2, which includes Philadelphia, Washington, D. C., Virginia, W. Virginia, Kentucky, North Carolina, South Carolina, Louisiana, Mississippi, Alabama, and Florida.

D. N. Griffin, '26, was elected for Area No. 3, which includes W. Pennsylvania, Ohio, and Indiana.

W. P. Ruemmler, '38, was elected for Area No. 4, which includes N. Illinois, Chicago, Wisconsin, and Minnesota.

D. P. Hale, '34, was elected for Area No. 8 which includes Idaho, Montana, N. and S. Dakota, Wyoming, Nevada, Utah, Colorado, Arizona and New Mexico.

Additional details about the newly elected Board Members will be included in a future issue of the *Alumnus*.

Dr. Fletcher to Head

A. I. M. E. in 1953

Andrew Fletcher, Hon. '49, is President-Elect of the American Institute of Mining and Metallurgical Engineers for 1953, according to an announcement of the July 1951 issue of *Mining Engineering*. Dr. Fletcher was the commencement speaker at the Spring Commencement in 1949, and received then the honorary degree of Doctor of Engineering. He is president of St. Joseph Lead Company with offices in New York City.

Dr. Fletcher's nomination brings to five the number of M.S.M. alumni and honorary alumni who have held the post of President of the American Institute of Mining and Metallurgical Engineers. These include Dr. Henry C. Buehler, who was president in 1933; Dr. D. C. Jackling, president in 1938; Dr. Eugene McAuliffe, in 1942; and Dr. L. E. Young, in 1949.

Have you attended your local section meetings?

Coach Saunders Tells Own Story About What Made The Famous 1914 Team Click

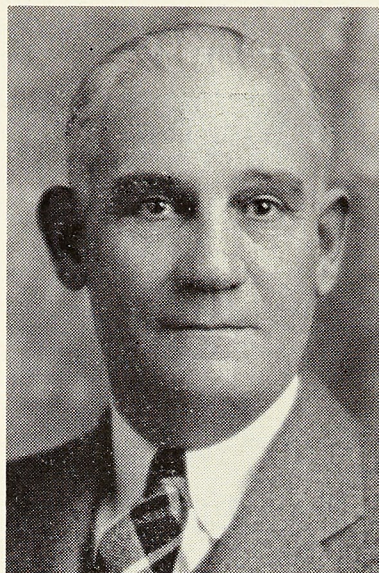
To show clearly my connection with the Missouri School of Mines Football Team of Nineteen-fourteen, it will be necessary for me to go back a few years to show the respect and high regard I had for the Miners material. I remember well the opening game with Missouri University in 1910, the score of which was nothing to nothing, and I believe our Missouri team was clearly out played. In this game a Mr. Macomber gave us a very rough afternoon. 1912 in Kansas City the Rolla team played my William Jewell team a nothing to nothing game and they looked very good. The following year I officiated a game at Muskogee, Oklahoma in which the Miner material looked excellent, in fact I was so impressed that I would have coached them for nothing, and when their coach, a former Penn State player, decided to give up coaching, I applied for the position.

Double or Nothing

Some time during the summer a meeting was held in St. Louis with Acting Director Garrett at which time I proposed to coach the football team for a certain fixed salary, or I would work for nothing if they did not defeat Missouri and double the salary if they did. I was employed at the fixed salary. I was to coach the football team and the team was to live and eat their meals in the Director's residence on the campus, which was not occupied due to the fact that Mr. Garrett had a home in the city. I was sure that condition was what was needed to make them win.

Upon reaching Rolla I found that they had employed Thomas Kelley as Athletic Director, and he at once took charge of the team although I insisted that I had been hired to do the job and Acting Director Garrett agreed with me, however Mr. Kelley had charge until after the Missouri game, and rather than cause friction I cooperated in every way. However, after this game Mr. Garrett had Mr. Kelley turn the coaching over to me. My system of offense was similar to the Penn State offense as I had worked under Hollenback who had coached at Penn State and the boys took to it

at once. We used a balanced line, loose ends, unbalanced back field, with the quarterback under center. From the formation we used a good many split bucks, and our quick opening play with the fullback



W. H. Saunders

carrying scored many points. We also used formation with backs in line and deep wing back from which plays were run with direct passes; most of our long runs and passes were made from kick formation or variation of kick formation by our fine fast backs.

Players Above Average

The personnel of the squad was above average. Some of the best men from the year before were on hand, and although some fine players were missing, their places were taken by some fine newcomers. The squad was not large and most of the games were played with few men. It consisted of: Captain Mountjoy, right end; Houston, right tackle; Brandenberger, right tackle; Long, right guard; Wilson and Miller, centers; Askew, left guard; Copley, left tackle; K. Miller, left end; Kiskadden, quarterback; Bland and McCartney, left halfbacks; and Freeman, fullback. Klein played a good deal at end, and Dover, Kepel and Rogers played in some games. Kiskadden was one of the finest quarterbacks a coach could ask for,

a good kicker and passer as well as a runner; he never called a wrong play during the entire season. Freeman was a fine back both offensively and defensively, an exceptional line bucker. Bland and Imley were two wonderful halfbacks, and I would not rate one above the other. The whole line was fast and powerful; Copley would be All-America if he were playing today. He was very fast, weighing 196, and wearing a number five show, he was brought back into the back field, playing five yards back to run and pass. He was also used on punt formation to run and pass, as he was a long accurate passer. However, Kiskadden did most of the kicking and was a good passer. Wilson, a big rangy player, was a power on offense and defense. Askew and Long were fine guards. Long could play a good game at tackle. McCartney, I thought, would develop into as fine a back as Bland and Imley. Houston was a great tackle until he was injured.

Beat Missouri U. 9-0

In early season practice we were very careful to withhold any information regarding the team as we did not want Missouri to take us too seriously. They had defeated the Miners forty-four to six the year before. On October third the game was played with Missouri in Columbia, and after fifteen years the Miners succeeded in defeating the Tigers nine to nothing. In this game Missouri was out-played, and although Bland and Imley made long gains and Freeman was a power in bucking the line, the Miners were unable to cross the Tiger goal line. However they were close enough for Freeman to kick three place kicks in three attempts. In this game the Miners used only thirteen men, eight of whom played in the 1913 game. There was, of course, quite a celebration on our return to Rolla, with a parade, speeches, etc.

The next game on the schedule was played in Rolla with the Kansas School of Mines from Weir, Kansas. This was a scrappy little team but no match for the Miners who were coming along and the final score was Rolla 87, Kansas Mines 0.

The following week the Washington University team was played in St. Louis on a rather muddy field. In this game the Miners really began to click, and although they

were handicapped by penalties there was no doubt as to which team was superior, and the score 19 for Rolla to 0 for Washington does tell the true story as the Miners were penalized 150 yards to Washington's 15. Freeman was a power with his line bucking. Bland and Imley were great with their open field running; Bland returning punts for forty and fifty yards, and his thirty-yard run for a touchdown was sensational. Kiskadden ran the team with rare judgment and played a fine all around game. Copley was in every play on defense and was being used on offense for the first time, making some very good gains. In this game we were nearly scored on as Washington had a man open for a pass, but the ball slipped thru his hands. A great many fans followed the team to St. Louis, and I believe there were more students on top of the train than on the inside.

Stop Arkansas, 40-0

The next game was played with Arkansas University in Fayetteville and was won by the Miners, the score being 40 to 0. In this game the team used mostly straight football, and was not forced to punt during the entire game. However, Copley threw a thirty yard pass to Klein for the last touchdown. It was my custom on the night before a game to rehearse kick-offs at slow motion, but one of the boys forgot and put on a real block injuring Houston's knee so badly that he was out for quite a long time. However, it gave Brandenberger a chance, and he developed into a first class tackle. Arkansas nearly scored when a drop kick from the thirty yard line missed inches. Mr. E. T. Pickering, the coach of the Arkansas team, had played end on the Minnesota University team, and when we came on the field he recognized Jack Imley, as Jack played on the South Dakota University team that played against them. Jack had made a touchdown around his end. The work of Kiskadden, Bland, Imley, Freeman and Copley stood out in this game.

On November 5, the Drury Panthers came to Rolla and were defeated by the score of 68 to 0. Freeman and Houston were out of this game due to injuries. However, Bland and Imley made runs from fifty to eighty yards, Imley making three touchdowns, Bland and

Mountjoy two, and one each by Copley, Kiskadden and Dover.

On November 12, Kansas State Normal of Pittsburg, Kansas, came to Jackling field and were easily defeated 104 to 0. The whole team played well on offense. K. Miller and Kiskadden were outstanding on defense.

Miners 150; Osteopaths 0

The Kirksville Osteopaths were next on the schedule. This team had been defeated by Christian Brothers College of St. Louis 54 to 0, and on the strength of this score were claiming the State Championship. For this reason our aim was to run up the score and we had planned to use long passes, but found that we could score quicker with long runs as our backs would score nearly every time they handled the ball, and the Osteopaths were in no condition to stand this fast pace. Between halves Sol Hastings, a former All-Conference tackle while at Missouri and now captain of the visitors, asked me to cut the time of the quarters in the second half. We cut them four minutes a quarter or eight minutes in the last half. The score, Miners 150, Osteopaths 0, was the largest score in the country that year if not an all time record as they averaged three points per minute. Imley scored eight touchdowns, Freeman five, Bland four, Copley two, and Kiskadden, K. Miller and Kline one each. Kiskadden kicked eighteen points after touchdowns.

Defeat St. Louis U., 63-0

The final game of the regular season was played against St. Louis University in St. Louis on Thanksgiving Day and was won by the Miners by the score of 63 to 0. The game was played on the St. Louis field and the dressing rooms were separated by a thin partition and conversation could be readily heard; so I decided to send the reserves out first, instructing them to make a great deal of noise. I kept my starting line-up very quiet. Coach Kegan gave a great pep talk to his team in the course of which he said, "We will take care of that Copley if we have to put three men on him." When the St. Louis team left their dressing room I did not have to make much of a talk. I just turned to Copley and said, "They say they are going to take care of you. I don't think they can do it."

Copley looked up at me and said, "It will take a regiment." Only he used stronger words. In spite of the score the game was hard fought and very rough. Jack Imley had a bone broken in his face and had to leave the game. Copley had his nose broken late in the second half and had to be taken out. It would be hard to pick one player as the star of this game as they all played well. Kiskadden played his usual good game, and of course Copley and Imley were great, and McGartney played fine football.

The team had scored 540 points and had not been scored upon, a record for big time football. Several of the players were picked on the Honor Roll of the Missouri Valley.

Post Season Game

This ended the most successful season in the history of the Missouri School of Mines, but pressure was being exerted to promote a post season game with Christian Brothers College. The St. Louis papers played up the game and petitions were presented to the faculty. After much discussion and many meetings, the faculty decided to refuse permission to play the game either as a team representing the school or as an independent team and passed a resolution whereby any members of the squad playing in this game would be suspended and the semester credits taken from them. There was no doubt in my mind that the Rolla team could defeat the Christian Brothers team or any other team they were matched with, but this team had no claim to the Championship and I was against playing it. In spite of the faculty ruling, the game was played as an independent team, and, I understand, won by the independents 36 to 6. I did not see the game. Whether it was a mistake to play this game I cannot say, but out of it came a faculty ruling that each player must pass in twelve hours work and be certified, which, in itself, was worth while.

Where most of the boys are now I cannot say. Kiskadden lives in Indiana, Bland in St. Louis, Askew, Houston, Imley and Wilson, I understand, have passed away. They were a grand squad of boys. The school is a real He-man's school, and it was a real pleasure to be the coach of this great 1914 Miner team.

Electrical Engineering Graduates Fill Responsible Positions In Many Fields

By Prof. I. H. Lovett

Since the first student was graduated in electrical engineering at the Missouri School of Mines in 1917, there has been awarded a total of 663 degrees of B.S. in Electrical Engineering. While the number of such graduates in recent years has been large, all have had opportunity to fill responsible positions in the various fields of electrical engineering. The number of graduates awarded the B.S. degree in the last five years is as follows: 20 graduates in 1947; 36 graduates in 1948; 105 graduates in 1949; 153 graduates in 1950; 68 graduates in 1951. Since the first degree of Master of Science in Electrical Engineering was awarded in 1947 there has been a total of 16 such degrees awarded. In spite of this large number of electrical engineering graduates, the demand by industry has greatly exceeded the supply, particularly during the past year when personnel representatives of various industrial organizations interviewing students on the campus have not been able to fill quotas of new employees. This shortage of engineering graduates, not merely in the field of electrical engineering, is one of the most serious problems now confronting industry.

E. E. Curriculum

For the training of electrical engineering graduates at MSM a curriculum has been developed which places emphasis on fundamental principles, at the same time permitting some degree of specialization in the senior year through selection of certain elective subjects. In the development of such a curriculum, consideration was given to new applications and new techniques in various phases of the electrical field, as well as to the training in fundamentals upon which a student may later base his choice of specialization.

Attention has been given to the development of the curriculum so that it will provide adequate training leading to work in both of the two major electrical engineering fields—power and communication. Courses providing this training are included in the first three

years when all courses are specified as required. In addition to certain required courses during the fourth year there is a total of 15 credit hours of elective subjects. In this group of elective subjects the senior student may include courses related to machinery and power systems, or those related to advanced electronics and com-

munication. It is also possible for the student to select a combination of courses related to both general fields.

In the selection of elective subjects in the senior year it is also possible to take work of a type to provide training which will emphasize a functional division in electrical engineering. Thus courses valuable for training in the classification of research, design and development or in application, service, and production, may be selected.

During the past two years several new undergraduate and graduate courses have been added to the electrical engineering curriculum. New undergraduate communication courses are: Communication Networks Laboratory, and Ultra-High-Frequency Laboratory. These new courses accompany lecture courses on the same subjects. A two-semester sequence of courses has been added to cover some of the advanced electronic systems with special emphasis on television. A course recently added in the power field is titled Power System Stability and Protection.

In order to keep in step with the increased graduate work in the Electrical Engineering Department five new lecture courses have been added on the graduate level. Two of these comprise the two-sequence courses in Mathematical Analysis of Electrical Engineering Problems; the other three courses are: Advanced Transients in Linear Systems, Servomechanisms, and Advanced Electromagnetic Waves and Radiation.

E. E. Teaching Staff

The Electrical Engineering Department during the present semester has 10 members of the teaching staff; they have major activities and interests as follows:

Instructor Palmer L. Anthony has had training and experience in electrical machines and circuits and is in charge of courses in these subjects for civil engineering students. He is working on requirements for a Master's Degree in Electrical Engineering at MSM.

Instructor C. James Grimm has had a broad experience over a period of twenty years in teaching, in design and consulting work for the British Air Ministry, and later as senior electrical engineer on the European Theatre of Operations consulting staff. He is in charge of

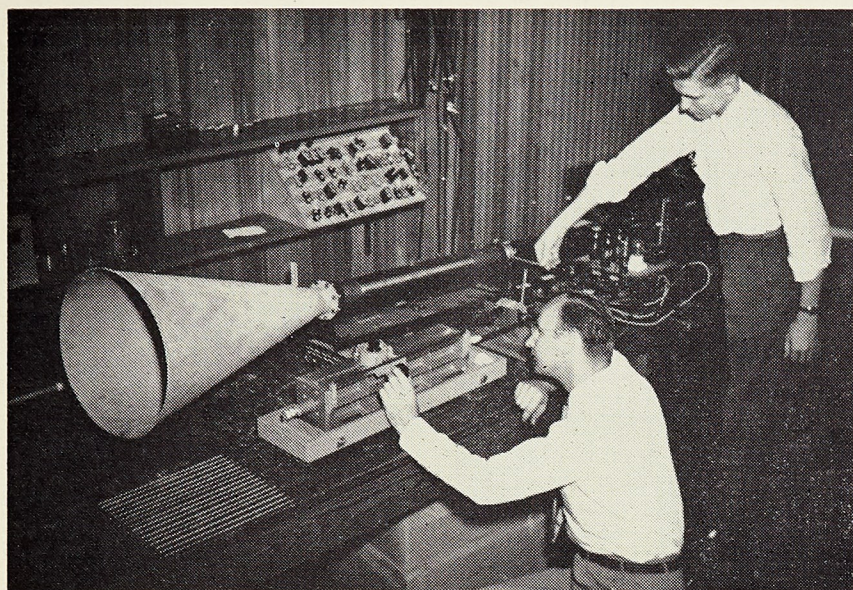
Professor I. H. Lovett, Chairman of the Department of Electrical Engineering, has been a member of the Faculty of Missouri School of Mines and Metallurgy since 1921. He is a graduate of M.I.T. and



PROF. I. H. LOVETT

has a Master of Science degree in Electrical Engineering from the University of Michigan. His own field of specialty is Electrical Power. However, under his Chairmanship the department has added equipment and courses in Electronics and other relatively new fields which are now applied not only to communications but to other types of industrial operations.

Rael, as he is affectionately known to his many friends, is a pillar of strength and loyalty on the Faculty. He has served the school with unswerving devotion for thirty years.



Demonstrating Radiation of Ultra High Frequency signals by means of horns.

a course in fundamental principles of electrical engineering for sophomores and various courses in electric circuits and machines for students in mechanical and mining engineering curricula. He is a registered professional engineer in Missouri.

Assistant Professor A. W. Grove has had many years experience in electrical engineering practice in various fields related to electrical machinery and had teaching experiences at Rhode Island State College before coming to MSM in 1948. He is in charge of electrical machinery courses for senior E. E. students. He is a registered professional engineer in New York state.

Assistant Professor H. R. Horton has had a broad experience with Westinghouse Electric Corporation, Pittsburgh Railways Company, and St. Louis Public Service Company in various types of engineering and management problems. He is in charge of several courses in electric circuits and machines for students in mechanical, chemical, metallurgical and ceramic engineering curricula. He is a registered professional engineer in Missouri.

Professor I. H. Lovett has completed thirty years of service at MSM. He serves as department chairman and presents courses related to electric power systems, and

power network calculations. He is a registered professional engineer in Missouri.

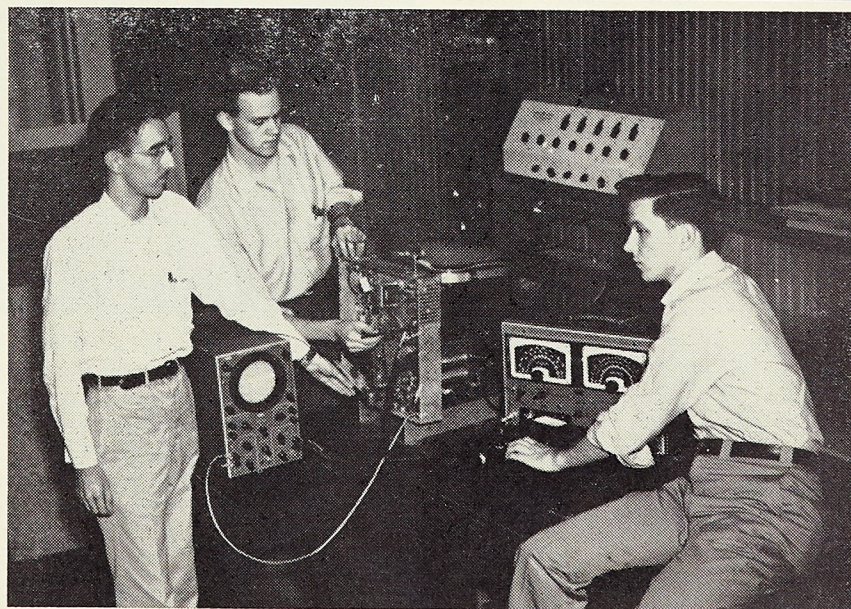
Assistant Professor R. E. Nolte served as Engineering Officer, U.S.N., Assistant Electronics Officer, Charleston Navy Yard, and had teaching experience at Iowa State College before coming to MSM in 1949. He is in charge of courses in electronics, communication networks, and in television. During summer vacations he is working

on requirements for a Doctor's Degree at University of Illinois.

Assistant Professor J. W. Rittenhouse had experience in electric power transmission and distribution equipment, and as officer in charge of Signal Corps inspection in various areas before coming to MSM in 1947. He is in charge of various courses for electrical engineering juniors and seniors in electrical machinery, electric power transmission, and in electronic and power control systems. He is a co-author with Dr. J. Zaborszky of a book on electric power transmission now under preparation. A paper by Professor Rittenhouse titled A Study of Cathode Drift Compensation in Direct Coupled Amplifiers has been accepted by the A.I.E.E. paper committee for presentation at a general meeting with date not yet scheduled. Prof. Rittenhouse is a registered professional engineer in Missouri and is working on requirements for a Doctor's Degree at Purdue University.

Instructor G. F. Sinnamon had pre-radar training and experience in U. S. Signal Corps, and teaching experience in army service courses before coming to MSM in 1949. He is in charge of courses in principles of alternating currents, electrical measurements, and fundamentals of radio. He is working on requirements for a Master's Degree at MSM.

Assistant Professor G. G. Skitek
(Continued on Page 12)



Laboratory Calibration of a Television Receiver.

Great Demand for Engineering Grads to Fill Estimated 30,000 Places a Year

The number of young engineering graduates who can reasonably be expected to be available for industrial employment over the next 10 years will be far below the estimated annual need of 30,000 men. It may drop to as low as 12,000 in 1952. From 1954 until 1957 it will be about 17,000 per year. After 1957 it should start increasing, but will not equal the annual need until about 1965. These conclusions have been reached in an estimate prepared at the request of the Engineering Manpower Commission of the Engineers Joint Council. They are based on current enrollments in the engineering colleges, on pre-Korea trends, and on the probable effects of recently announced Selective Service policies with respect to the deferment of college students.

The writer has for many years been a member of the Manpower Committee of the American Society for Engineering Education and in that capacity has prepared many estimates of the number of graduates to be expected from our engineering colleges. The last such estimate was presented before the Society at its annual meeting in June 1950. It was based on trends in the birth rate, in numbers graduating from high school, in the percentage of high school graduates entering engineering colleges, and in "normal" graduation ratios in engineering colleges. Since it was prepared before the Korean incident, no allowance was made for military needs which have arisen since that event.

The actual engineering enrollment by classes in the fall of 1950 turned out to be almost as estimated in the spring.

It seems likely that the net effect on the output of engineering colleges of the new Selective Service procedures for the deferment of college students will be quite small. An official of the Educational Testing Service, which has prepared the test to be used in these procedures and which will be in charge of its scoring, has made a comparison of the new test with the engineering aptitude test which his service has been admin-

istering for several years. He estimates that the average engineering student will probably do better on the test than will the average college student, and that on the combination of class standing and test scores the percentage of engineering students who will be eligible for deferment may be as high as 70 per cent for freshmen,

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**This article was written by Henry H. Armsby, Associate Chief of Engineering Education, U. S. Office of Education.**

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77 per cent for sophomores, and 85 per cent for juniors.

If this "military attrition" represented the total losses of students during a college course, we could expect to graduate during the next four years about the same numbers of engineers that have

previously been predicted from a consideration of "normal attrition" factors. In 1951 there would be no change, since it is not expected that any seniors will be removed from college prior to their graduation. For 1952 we could expect to graduate 85 per cent of the present 34,000 juniors, or about 26,000 men. In 1953 we could expect to graduate 85 per cent of 77 per cent of the present 31,000 sophomores, or a total of 20,000. In 1954 we should graduate 46 per cent (85 per cent x 77 per cent x 70 per cent) of the 34,000 who are now freshmen, or a total of 16,000.

Normal Attrition

In addition to the military attrition however, the normal kinds of attrition will also be taking their toll of college students. The chief factors in the normal attrition are scholastic failure, financial and family difficulties, sickness, and change of major interest on the part of the student. No exact figures can possibly be presented as to the effect on these



School officials with student winners of the American Foundrymen's Association Scholarships at the Missouri School of Mines and Metallurgy. The scholarships are awarded by the association to attract trained men into the foundry industry, where a critical shortage of such men exists. Left to right, Ralph L. Hollocher, St. Louis, Mo., Leland D. Beverage, Belleville, Ill., Morbert F. Neumann, St. Louis, Mo., Joe L. March, Rolla, Mo., Don L. Mathis, Lemay, Mo., Jack M. Wheeler, St. Louis, Mo., Alan B. Burgess, Normandy, Mo., Jack H. Humphrey, Berwyn, Ill., William D. Bradley, Rolla, Mo., Dr. A. W. Schlechten, Professor of Metallurgy, Dean Curtis L. Wilson, Jack H. Thompson, Normandy, Mo., Anthony J. Selvaggi, Newark, N. J., Albin B. Charneski, Brooklyn, N. Y., and Dr. D. S. Eppelheimer, Professor of Metallurgy.

normal kinds of attrition of the program of Selective Service. However, some rough estimates may be worthy of consideration.

New Attrition Factors

There will be, in addition to military attrition and normal attrition, two new kinds of attrition to be considered. These are voluntary enlistments and failure to return to engineering after military service. Voluntary enlistments may prove to be a considerable factor temporarily, but their net effect will be merely to place the period during which the graduation of these men is postponed a little earlier than it would have been had the student not enlisted. As to the failure to return to engineering after military service, the number of men who fail to return may well be balanced or even exceeded by the number who are attracted to engineering for the first time by their military experiences. Such experiences during World War II accounted for a considerable part of the tremendous increase in engineering enrollments which took place immediately after the close of hostilities.

It is the considered opinion of the writer, in which he is joined by other staff members of the Office of Education and by representatives of the Manpower and Employment Statistical Division of the Bureau of Labor Statistics, that the net effect of all these attrition forces will be to produce over the next few years about the same number of engineering graduates which would be expected under normal attrition rates, or, in other words, the numbers shown in column 2 of Table 1. When these figures are contrasted with the estimated annual need of 30,000 engineers, the outlook for the Nation is not encouraging.

But when we try to estimate the number of these engineering graduates who will be available for industrial employment, the picture is still less hopeful.

Selective Service Deferments

The new Selective Service regulations concerning the deferment of college students have apparently led many persons to think that all students who can either meet the requirement of a certain

Observe Golden Wedding Anniversary



Left to right: Dr. J. W. Barley, Mrs. Barley, Mrs. Louise Laurenz, their daughter, and Miss Genevieve Barley, his sister.

Dr. J. W. Barley and Mrs. Barley celebrated their Golden Wedding Anniversary at their home at 201 East 12th Street on September 5.

Dr. Barley has been on the MSM faculty for 39 years, having joined the English Department staff here in 1912. In 1943 he became Professor Emeritus under the Carnegie Foundation. Dr. Barley is still active, still likes to go fishing and enjoys his contact with alumni of the school. Alumni who attended the

celebration were:

R. C. Lange '37, Rex Williams '31, Lucian Erskine '35, R. M. Rankin '27, John Bowles '08, Ed Schuman '20, H. D. Thomas '28, Albert Long ex '19, Mary Eyberg '32, Syl Pagano '46.

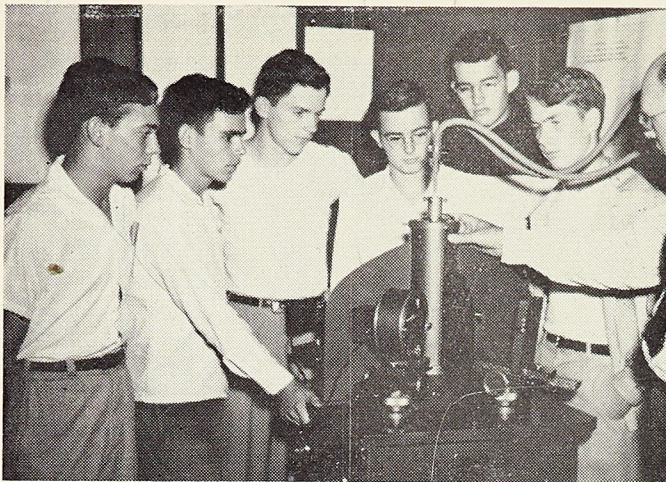
Maurice Suhre '31, Howard Katz '40, Alfred Smith '27, E. W. Carlton '26, Chas. McCaw '31, Powell Dennie '40, H. R. Hanley '01, Chalmers Kerr '21, J. J. Bowles '10, John M. Morris '19.

rank in college class or can make a specified score on the test will be excused from military service, that they can proceed to graduation, and that then they will be available for industrial employment.

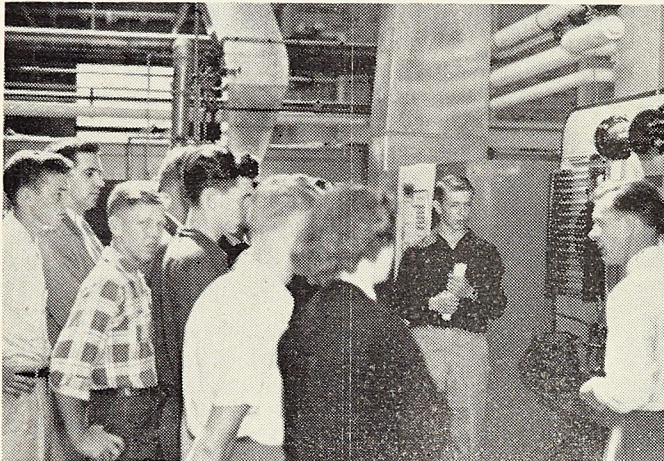
Actually, students who meet these requirements are only eligible for deferment if their local board wishes to defer them, and even then they are only deferred—not excused—and in general are all destined for military service upon graduation. It is true that Selective Service regulations provide a period of 30 days following graduation for a man to secure employment in defense industries. If during that time a man is able to establish himself as a necessary man in a defense industry, who cannot be taken for military service without a severe injury to the

defense effort, his deferment may be extended. This is a stipulation which will be very difficult for the average new college graduate to meet, although it is possible that a few may do so. Even these will still be liable for military service up to the age of 35.

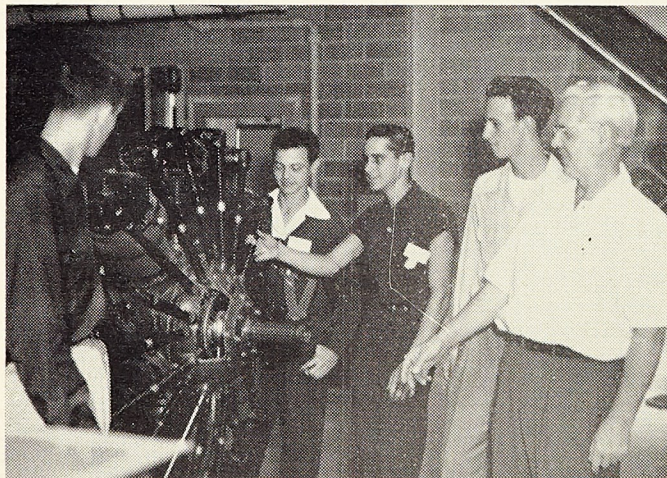
This all means, in effect, that the only engineering graduates who can be counted on as available to industry will be the 4-F's, the women, and the veterans who are not receiving commissions or who are not enrolled in a reserve component. The number of women enrolled in engineering colleges is so small numerically that they will be omitted from further consideration in this study, except to remark that it might be desirable for the engineering profession to study the idea of attempting to increase their number in the future.



Dr. O. R. Grawe, Professor of Geology, extreme right, demonstrating the use of the X-Ray in Geology to a group of students from Bonne Terre, Missouri.

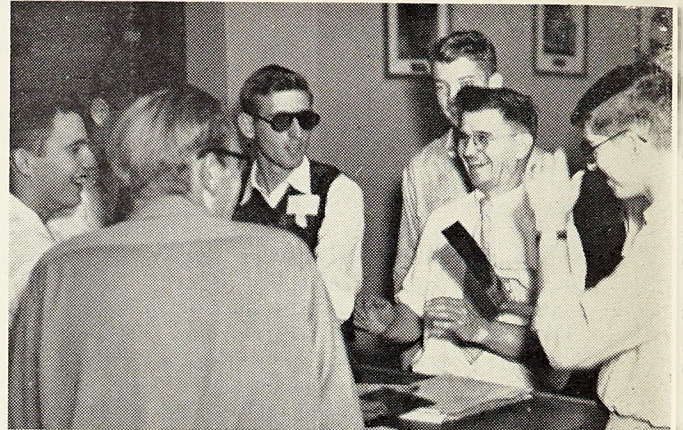


Professor C. J. Thorpe explaining the York Trainer, a refrigerating machine made of glass, in the Mechanical Engineering Department.



Professor A. V. Kilpatrick of the Mechanical Engineering Department explains to a group of interested boys a Pratt and Whitney Radial Flying Engine, with sections cut out to show the various units of construction.

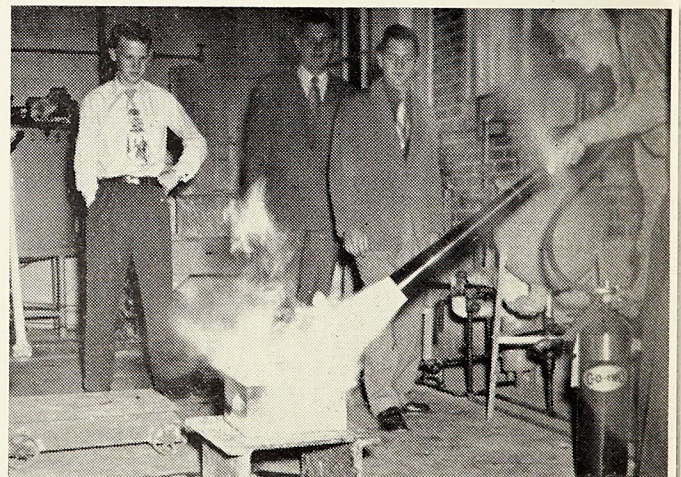
Engineers' Day, 1951



Professor C. W. Eshbaugh of the Civil Engineering Department giving a polaroid picture demonstration presenting third dimensional effect in Photogrammetry.



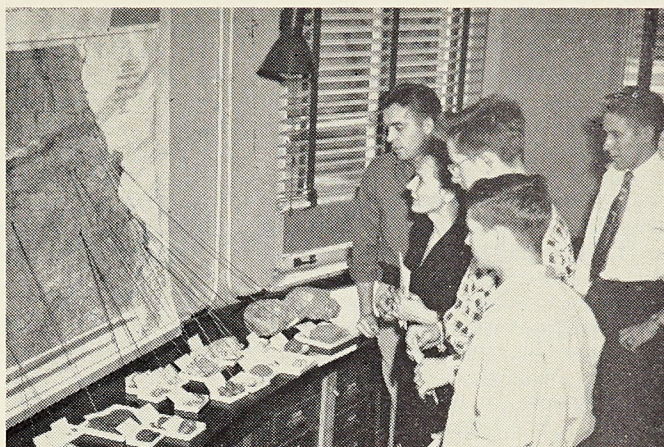
Robert Wolf, graduate student in Mining Engineering, explaining the operations of the Groman type furnace used in melting practice in the foundry industry.



C. W. Ashburn, sophomore in Chemical Engineering giving a demonstration of the use of carbon dioxide in extinguishing an oil fire.



Donald W. Spencer, senior student in Civil Engineering, explaining to a group of interested youngsters some engineering problems involved in road construction.



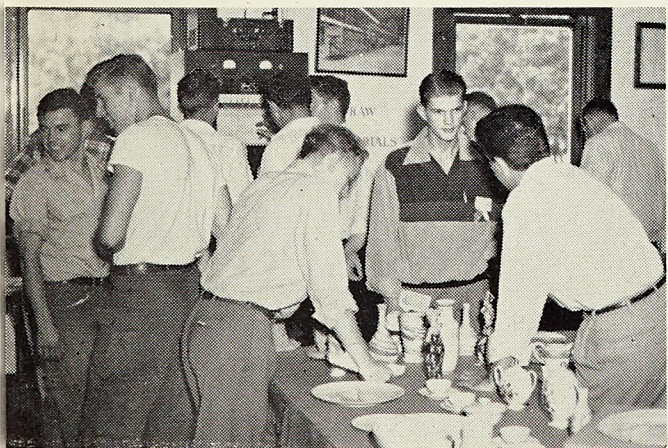
Donald Quinn, a senior in Mining Geology explaining the C. L. Dake Geological Society's exhibit showing fossils and the area in Missouri from which they came. The group of students is from the Belle High School.



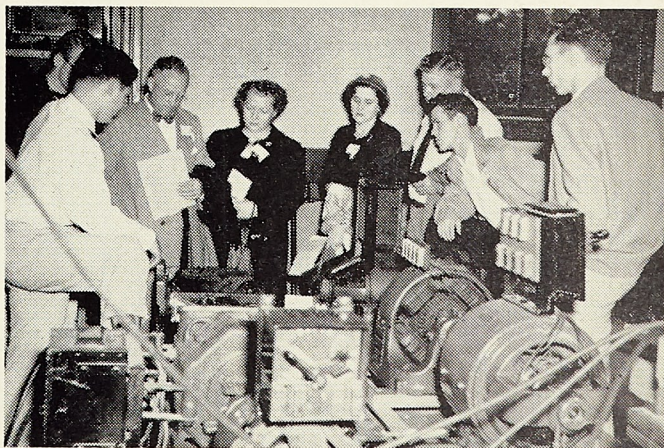
Roger J. Scrivner, senior in Ceramics, demonstrating the use of the Optical Pyrometer to a group of students from Harris Junior College, St. Louis.



An interested group in the Electrical Engineering Department viewing a demonstration of the cathode ray oscilloscope, where they could see the wave of their voices as well as hear it.



Peter Kurtz, senior in Ceramics, explaining a display of Whiteware in the Ceramics Department.



Paul G. Breazeale, senior student in Electrical Engineering demonstrating a Rotating Magnetic Field.

Electrical Engineering

(Continued From Page 7)

had experience as Electrical Engineering Officer, Army Air Corps, on design of electrical instrumentations on aircraft, and on tests of propeller equipment before coming to MSM in 1946. He is in charge of courses in radiation and antenna systems, advanced radio engineering, electrical transients, and ultra-high-frequency techniques. During summer vacations he is working on requirements for a Doctor's Degree at Ohio State University.

Associate Professor John Zaborzky had teaching experience at Royal Hungarian Technical University after completing requirements for degree of Doctor of Science in Engineering. In addition he served as Chief Engineer in charge of the design and development of the transmission and distribution system of the municipal power system for the city of Budapest, before coming to MSM in 1948. He is in charge of courses in power transmission circuits, power system stability and protection, mathematical analysis of electrical engineering problems, and in servomechanisms. He is a co-author with J. W. Rittenhouse of a book on electric power transmission. He presented a paper on Capacitor Switching Phenomena with R. C. Van Sickle of Westinghouse Electric Corporation, at the 1951 Midwinter A.I.E.E. meeting at New York, and will present a paper with C. F. Cromer a former graduate student, on Fast, Approximately Short Circuit Calculations on Secondary Networks at the 1951 Fall General A.I.E.E. meeting at Cleveland.

Graduate Program and Research

In 1946 a program leading to a Master's Degree in Electrical Engineering was started at MSM with the first M.S. in E.E. degree awarded in 1947 to H. L. Seneff, Jr., now Assistant Professor of Electrical Engineering at University of Missouri at Columbia. In this program which was developed to meet demands of former military service men, a group of eight men was graduated in May 1951. At the present time there are eight men registered as graduate students.

Research work in various fields in electrical engineering has been carried on as part of the graduate

program with subjects listed as: Analysis of Simultaneous Faults by the Method of Symmetrical Components; Design and Construction of an Electronic Gain-Phase Meter; A Study of Cathode Drift Compensation in D-C Amplifiers; A Study of Relay Behavior Under System Oscillations; A Study of Radio Frequency Converters and Mixers.

E. E. Student Organizations

The joint student branch of the American Institute of Electrical Engineers and of the Institute of Radio Engineers established at MSM in 1948 is one of the first of such joint branches established at engineering colleges. The interests and activities of students in various fields of electrical engineering are maintained in a single organization with a more active program than would be possible with separate organizations. Activities of this organization include discussions by leading engineers, student participation meetings in which talks of a technical type are presented, technical papers prepared for presentation at A.I.E.E. student conferences, and various types of social meetings.

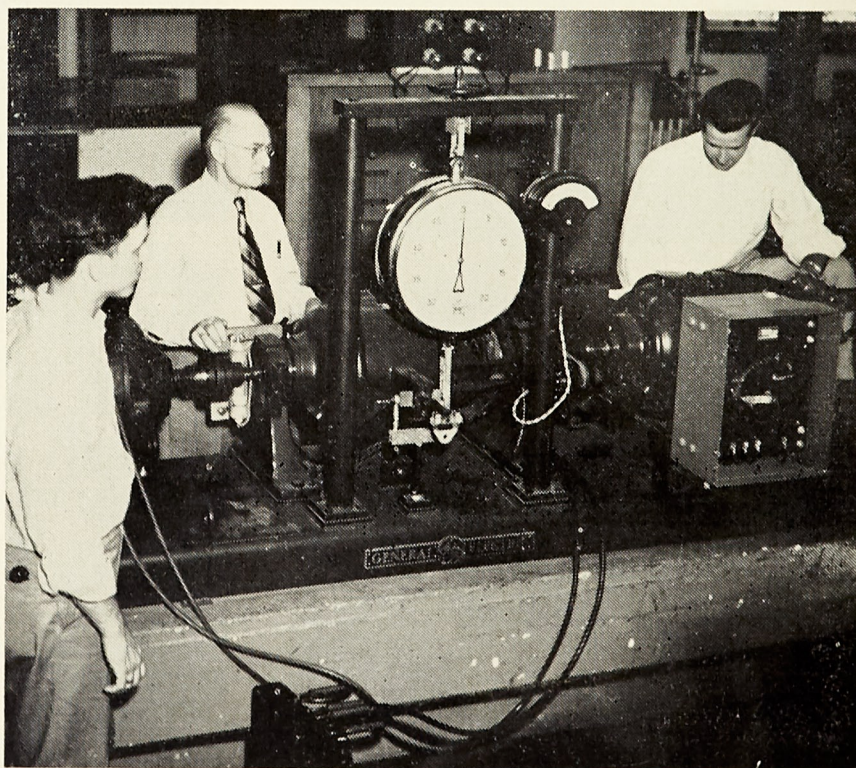
The Radio Club includes members who are particularly interested in amateur radio broadcasting. The organization sponsors special study groups on topics related to this field and maintains an amateur station.

The newest student organization in the department is Theta Mu, an Electrical Engineering Honorary Society, which was established in December 1950. This is a preliminary organization the purpose of which is to make preparations for recognition by the National Society of Eta Kappa Nu, when Theta Mu will become the MSM chapter of Eta Kappa Nu. Some of the activities of Theta Mu are: preparing distributing the Electrical Engineering Department News Letter that is sent out each semester to electrical engineering alumni; selecting the outstanding senior electrical engineering student of the year; offering cash awards for the best A.I.E.E. - I.R.E. student paper.

New Laboratory Equipment

Lack of space prevents present-

Have you attended your local section meetings?



Determination of efficiency of an electric motor by means of a dynamometer.

ing a complete list of laboratory equipment. Selections of equipment must be made which will provide adequate facilities both for the students in the electrical engineering curriculum and also for laboratory courses of students in other curricula. Further laboratory work in circuit analysis, communication networks and ultra high frequency is being developed and additional equipment is being obtained for this work.

Among recent items of equipment obtained by the department are the following:

An exploring coil generator which permits oscillograph studies of voltages generated in the armature structure.

A 72-terminal induction motor for study of effects of different combinations of windings and phase arrangements.

An amplidyne control and servo-mechanism kit for the study of control systems.

A fractional horsepower dynamometer for analysis of characteristics of fractional horsepower machines.

A portable harmonic generator to demonstrate wave shapes and properties of electric circuits.

A full wave reversing thymotrol drive to demonstrate wide range, stepless speed control of d.c. motors operating from an a.c. circuit.

Four motor-generator - dynamometer sets for study of characteristics of alternating and direct current machines. A d.c. calculating board for analysis of faults in a power system.

A Kalbell Dynamic Micromiker for measuring very small capacitances and inductances.

A Hewlett-Packard "Slotted Line" for use in high frequency measurements.

Two radio frequency signal gen-

Paul B. Rothband, '43, and Mrs. Rothband have announced the arrival of a daughter, Sarah McCrae, who arrived September 15, 1951. The baby weighed 8 pounds and 10 ounces. The Rothbands live at 605 Victory Dr., Collinsville, Ill.

Have you attended your local section meetings?

erators for radio receiver testing.

A Dumont model 304 H d.c. oscilloscope for study of voltage and current wave forms.

Two television receivers, one a General Electric with Schmitt projection system, and the other donated by Motorola Incorporated.

Two ultra high frequency oscillators, 375 to 700 megacycles, for laboratory use.

Proposed New Lab Facilities

Requests for appropriations for the completion of the Engineering Laboratories Project to provide critically needed space for electrical engineering laboratories have

been made by the Board of Curators but in spite of the fact that these requests have been designated as the Number One building need on the Campus the requests have not yet been granted. Present laboratory space in Norwood Hall is totally inadequate to meet the expanding needs expected in a few years. More adequate space for electrical engineering laboratories would greatly help in attracting attention of Missouri students interested in the field of electrical engineering, and help provide adequate training for them if they decide to attend MSM.

MSM Alumni Association

OFFICERS

Term Exp.

President	James L. Head	25 Broadway,	Nov. 1, 1953
		New York 4, N. Y.	
Executive	A. E. Barnard	613 S. Central,	Nov. 1, 1953
	Vice-Pres.	Clayton 5, Mo.	
Vice-Pres.	Horace H. Clark	7202 S. Shore Dr., ..	Nov. 1, 1953
		Chicago 49, Ill.	
Sec.-Treas.	H. R. Hanley	606 W. 8th St.,	Nov. 1, 1953
		Rolla, Missouri	

DIRECTORS

Area No.	Area Director	States Embraced	Term Exp.
1	E. A. Crawford, '29	Maine, New Hampshire,	1952
	213 Walther Ave.,	Vermont, R. I., Conn.,	
	Ridgewood, N. Y.	Mass., New York	
2	Gunnard Johnson, '16	Philadelphia, Washing-	1951
	1020 Palmetto St.,	ton, D. C., Va., W. Va.,	
	Davenport, Fla.	Ky., Tenn., N. C., S. C.,	
		La., Miss., Ala., Ga., Fla.	
3	L. A. Turnbull, '22	W. Penn., Ohio, Indiana	1951
	47 Nantucket Drive,		
	Pittsburgh, Pa.		
4	W. P. Ruemmler, '38	N. Ill., Chicago, Wisc.,	1951
	Eagle Picher Co., Box 540	Minn.	
	East Chicago, Ind.		
5	Harry S. Pence, '23	S. Ill., E. Mo., Ark.	1952
	118 Syndicate Bldg.		
	St. Louis, Mo.		
6	H. E. Zoller, '23	Iowa, W. Mo., Okla.,	1953
	3900 E. First St.	Kans.	
	Wichita, Kans.		
7	J. V. Spalding, '39	Texas	1952
	Bethlehem Supply Co.,		
	Box 3008, Houston, Tex.		
8	Dave P. Hale, '34	Idaho, Mont., N. & S. Dak., ..	1951
	960 Leyden Dr.	Wyo., Nev., Utah, Colo.,	
	Denver, Colo.	Ariz., New Mex.	
9	Barney Nuell, '21	Wash., Ore., Calif.	1952
	530 W. 6th St.		
	Los Angeles, Calif.		

Architects, Engineers Bills Become Law

Governor Forrest Smith signed two bills passed by the 66th General Assembly, and which, when they became law Oct. 9, were to bring up to date and strengthen Missouri's registration law for architects and professional engineers.

The two bills received full support by both professions and represent a big step forward for members of these two professions by giving statutory recognition to qualifications of architects and professional engineers to practice. Protecting the people and property of the state from damage through incompetent or unlawful practice of architecture or engineering is the purpose of the law.

Missouri's first registration law for both architects and professional

engineers was enacted in 1941 and is administered by a seven member board representing both professions. Through the experience of the board, several desirable changes have been recognized, and the two bills signed by Governor Smith contain these desired changes.

William M. Taggart, Jr.

William Miskey Taggart, Jr., '20, died in his home in Clayton, Missouri following a lingering illness. For many years he had been connected with Wm. M. Taggart and Company, Wholesale Leather, 1602 Locust, St. Louis, Mo. During World War II he was chairman of the St. Louis gasoline panel of the Office of Price Administration. When in school he was a member of Kappa Alpha and Quo Vadis. He is survived by his wife, Mrs. Clara Taggart, and two sons, Billy and Tommy.



Interested witnesses to the signing of the architects and professional engineering bills are, left to right: Fount Rothwell, Chairman, Legislative Committee, Missouri Society of Professional Engineers, Jefferson City; E. W. Carlton, Professor of Structural Engineering, Missouri School of Mines, Rolla; Bruce Williams, Chairman, Missouri State Board of Registration for Architects and Professional Engineers, Joplin; Huber O. Croft, Dean, College of Engineering, University of Missouri, Columbia; Don Fischer, Assistant Dean, School of Engineering, Washington University, St. Louis; Mrs. Clemmie V. Wall, Secretary, Registration Board, Jefferson City; John M. Schaper, Member Architects' Division, Registration Board, Jefferson City; Clifford Wood, Executive Secretary, Missouri Society of Professional Engineers, Jefferson City.

Frank R. Bell

Frank Rolla Bell, '03, died June 22, 1951. Mr. Bell was a farmer in Tip, Oklahoma, at the time of his death. He is survived by his wife, Mrs. Amanda Morgan Bell.

Richard F. Donaldson

Richard F. Donaldson, '39, passed away suddenly April 20, 1951. He was employed by U. S. Corps of Engineers, St. Louis District as Head of the Electrical Section. He is survived by his wife, Virginia B. Donaldson, 6230 Tyndal Drive, Berkeley 21, Missouri, and three sons, Kenneth age eight, Robert age five, and James age four. He was a member of the Radio Club, AIEE, and Engineers Club while at MSM.

Weddings

WUNDRACK - MILES

Miss Mary Ann Miles and William Albert Wundrack, '49, were married June 16, 1951, in the Baptist Church in Rolla, Saturday, June 16. The bride is the daughter of Dr. and Mrs. Aaron J. Miles, '30, 102 West Fourteenth St., Rolla, Mo. While in school the groom was President of the Engineers Club, a member of the MSM Glee Club and served as treasurer of the organization and was Secretary-Treasurer of the Independent organization. The couple will make their home at 3677 DeTonty, St. Louis, Mo.

GIBBS - DINGEE

Miss Carol Mae Dingee and Louis Albert Gibbs, '51, were married July 28, 1951, in New Rochelle, New York. While in school the groom was a member of the Independents and AIME. His mailing address is 24 Beech Road, New Rochelle, Westchester, N. Y.

ERIV - WERNICK

Miss Yvette Wernick, daughter of Mr. and Mrs. Charles Wernick, became the bride of Leon Eriv, '45, on Sunday, September 19, 1951, at Mt. Vernon, N. Y. When he was in school Leon was a member of the Shamrock Club, Engineers Club, AIME, ASM, Student Council, and Board of Control. He is now employed with Watch Cast Co., New York, N. Y.

Miners Defeat Warrensburg, Maryville In Opening Defense of M. I. A. A. Title

Coach Gale Bullman's Miners knocked off the first obstacle to their third straight MIAA Conference title with a close 12-6 victory over Warrensburg, Saturday, October 6. Played in a light rain, the MSM eleven proved to be better mudders than the Mules in the Parents' Day game at Rolla.

Still without the services of their first string fullback, Bill Roemmerman, of St. Louis, who is on the injured list, the Miners lack the plunging offensive strength of previous years. Bill is a brother of Dick Roemmerman of the 1949 and 1950 Conference champs. On Thursday evening, October 11, the Miners journeyed to Maryville and defeated the Bearcats, 30 to 14.

Losing most of his line through graduation, Gale and his staff have had difficulty keeping the line play up to par. Leland Beveridge, of Belleville, Co-Captain, and Roger Schoepel, of Sparta, Ill., have been playing both offense and defense in an effort to boost the line play. The backfield starters, all lettermen, are fast but light. Richard Hampel and Howard Bullman have been dividing the quarterbacking with Gene Huffman (co-captain) and Bob Proctor at the halfback positions. The Miners were to meet the

Kirksville Teachers on the latter's gridiron on Friday evening, October 19. The annual tussle with the Springfield Bears will be at Springfield this year on Saturday, October 27.

Homecoming at the School of Mines will be the following weekend, November 3, with the Cape Indians. A post-season game will be played with the Fort Leonard Wood eleven in Rolla on Saturday, November 10.

In the pre-conference season, the Miners ran up against strong opposition, losing to the Pittsburg (Kan.) Teachers, 20 to 0, to Murray (Ky.) State, 31 to 7, and to Washington U., 21 to 8.

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Alumni Personals

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1923

Hank E. Zoller gives his residential address as 8604 E. Harry St. Wichita, Kans. His business address is 1019 Central Bldg., Wichita, Kans.

Elmer F. Chapin gives his new address as 1017 N. Randolph St., Arlington, Va.

Joseph Worley will receive mail addressed to Eureka, Mo.

1924

Philip L. Blake, 597 The Alameda, Berkeley, Calif., is now Mechanical Supt., Western Regional Research Laboratory, U. S. Dept. of Agriculture, Albany, Calif. He was a campus visitor on August 4.

Curtis E. Stover has recently moved to 119 E. St., S. W., Miami, Okla.

1925

Thomas E. Eagan has been promoted to the new position of research metallurgist of the Cooper-Bessemer Corporation, 134 Lincoln Ave., Grove City, Pa.

1926

Edward M. Lindenau is now with the New Idria Honduras Mining Company, Apartado 173, Tegucigalpa, Honduras, Central America.

1927

James W. Hardy is living at 5833 Stony Island Ave., Chicago, Ill.

1928

Harold Robert Kilpatrick is now

Widow of Prof. M'Nutt Is Visitor On Campus

Mrs. V. H. McNutt, whose husband, now deceased, was a member of the class of 1910, was a campus visitor on October 4. She was in Rolla as a guest of John M. Morris, '19, and Mrs. Morris.

Mr. McNutt will be remembered as the geologist whose observations on a well drilling job near Carlsbad, New Mexico, resulted in the establishment of the American potash industry. While drilling for oil near Carlsbad, he observed cuttings from the drill hole which he thought might contain potash. He sent samples to the geology department of Missouri School of Mines for analysis and his judgment was confirmed. Out of this grew the United States Potash Company, and the American Potash Company. It also gave the United States an independent supply of potash which had all previously been imported.

Mrs. McNutt now lives on the famed Gallagher Ranch near San Antonio, Texas, where, in addition to maintaining a dude ranch, she raises outstanding Hereford cattle and fine saddle horses.

a Lt. Colonel, Hq. Trust APO 209, c/o Postmaster, New York, N. Y.

Ruth Veino Goodhue can be reached by writing Box 317, Rolla, Mo.

Joseph Warren Smith gives his address as 1920 Chicago Rd., Jefferson City, Mo.

1929

Walter B. Hollow's address is 4112 Bryn Mawr, Dallas 5, Texas.

Melvin Sharp was a campus visitor on August 3. Melvin was here arranging for his son to enter MSM this fall as a freshman. He is with the Columbia Coal Mine, Columbia, Utah.

1930

S. Allan Stone of the Deister Concentrator Company, Ft. Wayne, Indiana, was a campus visitor on Sept. 14. Stoney and his wife stopped off here briefly en route to Monett to visit his parents.

F. F. Netzeband gives his address as Box 191, Baxter Springs, Kans.

1931

Walter J. Ware can be reached at 3707 Virginia, Tulsa, Okla.

Richard B. Draper's present address is Rt. 13, Box 1524, St. Louis 22, Mo.

CHUBB - CARPENTER

Miss Carolyn Elizabeth Carpenter, daughter of Mr. and Mrs. Fred G. Carpenter of Toledo, Ohio, became the bride of Walston Chubb, '48, in the chapel of the First Congregational Church in Toledo on June 16, 1951. Walston was a member of A.S.M., and A.I.M.E. at the time he was in school. He received his MS degree from MSM in 1949. The couple are now living in their new home at 3244 Maize Road, Columbus, Ohio.

Joseph Eugene Greig, '49, and Mrs. Greig are the parents of a daughter, Jane Campbell Greig, born August 19, 1951, at the Phelps County Memorial Hospital in Rolla. The baby weighed 7 pounds and 4 ounces. Gene is employed with the U.S.G.S. in Rolla.

1932

Ray Gast is now president of Missouri Contractors Association. He is in the contracting business at Louisiana, Mo.

Rex T. Horn gives his address as 804 West 2nd St., Maryville, Mo.

1933

Alfred W. Beinlich was on the campus on July 29. He is a Ceramic Engineer and Chemical Engineer with the Tennessee Valley Authority. His home address is 3404 19th Avenue, Sheffield, Ala.

Rex Pinkley gives his address as Box 237, Lake Charles, Louisiana.

Warwick Doll and his wife, the former Ellen Woodman, spent their vacation in Rolla during July visiting at the home of Ellen's father Dr. L. E. Woodman, Professor emeritus in Physics, and Mrs. Woodman. The Dolls are living at 213 Main, Elkins, W. Va.

Edred N. Everett is with the U.S.D.A. Soil Conservation Service. He is living at 2026 S. Rustin, Sioux City, Iowa.

James J. Harmon, Jr., is working with Ludlow Saylor Wire Co. His home address is 416 Oakley Dr., Clayton 5, Mo.

1934

Oscar M. Duncan is living at 542 East 10th St., Mt. Vernon, Ill.

Roy E. Swift has joined the faculty of the Department of Mining and Metallurgical Engineering of the University of Kentucky at Lexington. He is living at 257 Lyndhurst Pl., Lexington, Ky.

LeRoy H. Johnson is with the Atomic Energy Commission, P. O. Box E, Oak Ridge, Tenn. He is living at 165 Outer Drive, Oak Ridge, Tenn.

Alumni Director David P. Hale, Jr., Mine and Smelter Supply Co., Denver, Colo., has been nominated for Rocky Mountain Vice-Chairman, Industrial Minerals Division, AIME for 1952.

1936

Eugene J. Daily is Assistant Professor of Civil Engineering, University of Illinois, Urbana, Ill.

Robert M. Springer gives his address as 11311 Union, Chicago, Ill.

1937

John F. Vahle, Jf., is living at 5521 Lindenwood Ave., St. Louis 9, Mo.

1938

Fred M. Mueller is employed by the Kuljian Corporation which

Alumni Personals

company acts as agent for the Damodar Valley Corporation, composed of the Indian States of Bihar, Bengal United Province, and the Federal Government of India. Fred's address is the Kuljian Corporation, P.O.D.V. Gobindpur, Hazaribagh Dist., Bihar, India.

Henry O. Steinmetz's most recent address is 9441 Brenda Ave., Affton, Mo.

Edward A. Ballman can be reached at R. R. 2, Godfrey, Ill.

1939

George E. Machens can be reached at 801 S. 18th St., Mount Vernon, Ill.

Vernon A. Sander's most recent address is 7051 Julian, St. Louis, 14, Mo.

Jim H. Jacobs is now associated with Union Carbide and Carbon Laboratories, Inc., Niagara Falls, New York, as Research Metallurgist. His home address is 191 Hillside Drive, Lewiston, New York.

Almon E. Rhodes has recently joined the Office of Engineering and Construction in the Atomic Energy Commission's Santa Fe Operations Office, Los Alamo, New Mexico.

1940

John J. O'Neill's address is 216 Chaffer, Roxana, Ill.

Ralph D. Hall is employed with the U.S.G.S. in Rolla. His address is 808 E. 6th St., Rolla, Mo.

Howard Martin Katz has recently moved to 1211 S. Johnstone, Bartlesville, Okla.

1941

Howard T. Gibbons gives his address as 610 E. King St., Fairfield, Ill.

Raymond Eugene Vaughn is living at 42 Alameda Pl., St. Louis 21, Mo.

Joseph O. Strawhun was a campus visitor early in August. He is Superintendent for Transcontinental Gas Pipe Line Corp., Box 472, Culpeper, Va. He is living at Warrenton, Va.

1942

Bailey Warren Hagar gives his address as 3224 Thomas Blvd., Port Arthur, Texas.

Arthur W. Wilson, 122 S. 6th St., Decatur, Ind., and his wife were

campus visitors on August 6. Arthur is with General Electric Co., Fractional H. P. Motor Eng. Div., Aircraft Motor Design Section, Ft. Wayne Works.

James H. Fox gives address as Graduate School, Dept. of Geophysics, St. Louis, Univ., St. Louis, Mo. He was a campus visitor on Sept. 14.

Paul E. Steinhoff has recently been appointed senior engineer in the process engineering department of Chemical Plants Div., Blaw-Know Co., Pittsburgh, Pa.

John R. Humphrey gives his new address as Box 358, Ishpeming, Mich.

Irwin L. Cherrick is living at 702 Chillum Rd., Apt. 101, Hyattsville, Md.

John W. Wise visited on the campus on Monday, August 13. John brought with him two boxes of mineral specimens from the new-open pit copper mine of the Kennecott Copper Corporation at Ray, Arizona where he is employed. These specimens were donated to the school.

John E. Brinkman can be reached at 107 North 3rd., Waterford, Wisc.

Fred Paul's mailing address is 411 Porter Ave., St. Louis 22, Mo.

Gilbert H. Blankenship Jr., who is employed with The Pure Oil Co., Box 671, Midland, Texas, is living at 1209 W. Michigan, Midland, Texas.

Thomas A. Jones has accepted employment with the Lion Oil Company at El Dorado, Arkansas. Tom's job is that of Evaluation Engr. and calls for knowledge of engineering, geology, law and accounting. This will utilize his training both in engineering and in law. For the present his mailing address remains 209 N. Elm Street, Little Rock, Ark.

1943

Theodore R. Hadley is employed by H & H Engineering Service of Kansas City, Mo. His residential address is 2606 West 77th St., Kansas City, Mo.

E. Harvey Barnett can be reached at 315-13th St., North, Texas City, Tex.

John V. Boland, Jr., is contracting with his father in St. Louis. His business address is 2715 Dalton Avenue, St. Louis 9, Mo. John writes that he and his father have just finished the completion of Weather Station P-64 at Kirksville, Mo.

James Glover is in the U. S. Navy. Mail sent to his home address at 1047 Forest Ave., St. Louis 10, Mo., will be forwarded to him.

C. F. Stueck was a campus visitor on August 4. He gives his address as 73 Webster Woods, Webster Groves 19, Mo.

Albert S. Keevil is a Designer-Detailer with Sverdrup and Parcel, 522 Olive St., St. Louis 1, Mo.

Robert P. McMath is a Captain in the Army. His address is Hq. 802nd Engineer Aviation Battalion, APO 970, c/o Postmaster, San Francisco, Calif.

Homer J. Ballinger is co-author of an article "Oil-Shale Mining Developments and the Mining Industry" published in "Mining Congress Journal" for August. He is Mining Engineer, Oil Shale Mine Branch, U. S. Bureau of Mines, Rifle, Colo.

1944

Stanley G. Bendorf has recently moved to 3433 Granada, Dallas, Texas.

Henry S. Adamick is now living at 308 W. 9th, Rolla, Mo.

Robert W. Klorer, who is employed with Spaulding Fibre Co., is living at 412 Chanslor, Ferguson 21, Mo.

William A. Hubbard, 233-16 131st street, Lawrelton, Long Island, N. Y., recently spent a week visiting his parents in Rolla.

1945

Arthur L. Schamburg can be reached by writing 15 North Walnut, Perryville, Mo.

1946

Oscar M. Olsen gives his address as 3160 Werk Rd., Cincinnati 11, Ohio.

Richard J. Doisy has recently moved to 106 Smith Lane, Apt. 3-B, Syracuse 5, N. Y.

1947

Donald W. Fink was a visitor on the campus on August 23. Don is Sales Engineer with the Herman Nelson Division of the American Air Filter Co. His home address is 915 DeMun, Clayton, Mo.

Jose G. McClinton, who is employed with Wagner Electric, gives his mailing address as 1043 Hastie Rd., Box 10404, Pittsburgh 34, Pa.

George H. Wagner gives his address as 305 W. Foster Ave., Tomah, Wisc.

Henry T. Capelle is living at 60 E. 53rd Pl., Tulsa, Okla.

Alumni Personals

James W. Snider's address is c/o Amerada, Casper, Wyo.

Darald D. Boyd is working for Chicago Pneumatic Tool Co. He is living at 6114 Morganford, St. Louis, Mo.

Anton Leone can be reached by writing Box 65, Bowling Green, Missouri.

Melvin F. Kallmeyer's address is 6640 Lindenwood Pl., St. Louis 9, Mo.

Wesley E. Weber is a chemist, International Shoe Co., 1820 Cherokee St., St. Louis 18, Mo. His home address is 1005 Van Nostrand, Apt. D., St. Louis 23, Mo.

1948

Robert V. Gevecker, who is employed with the Bureau of Bridges, State Hwy. Dept., Jefferson City, Mo., gives his home address as 503 West Elm, Jefferson City, Mo.

Maurice D. Wurth is working for Warren and Van Praag, Consulting Engrs., Decatur, Ill.

Edward H. Benn will receive mail addressed to 5534 Caenen, Shawnee, Kans.

Walter F. Smith gives his mailing address as 2300 S. Broad, Trenton, N. J.

Carl R. Johnson is living at 4730 Campbell, Kansas City, Mo.

Jesse M. Conyers, 2055 Knox, St. Louis 10, Mo., is employed with Robinson Const. Co., 5540 W. Park, St. Louis, Mo.

Irving C. Falk is employed as a mining engineer by the Bethlehem Steel Co. at Cornwall, Pa. He resides at 114 S. 9th St., Lebanon, Pennsylvania.

Dorothy Bradford's address is 4115 Silver Ct., Gary, Ind.

David G. Smith writes that he is living at 920 N. 22nd St., Mattoon, Ill.

Arne Normann gives his business address as Myrens Verksted, Oslo, Norway. Arne is living at Suhmsgt 5, Oslo, Norway.

James McGovern has recently moved to 209 Estridge Road, St. St. Louis 15, Mo.

John R. Barton's address is University Plaza Apts., Bldg. 116-S, Apt. D, Columbus, Ohio.

Billy Dwane McNary can be reached at 57 Metropolita Trailer Ct., 103 Monachie Ave., Monachie,

N. J., Via Wood Ridge P. O.

Gordon H. Moline visited on the campus on August 31, 1951. Gordon is employed by the Kramer Machine and Engineering Products Co. of Leavenworth, Kans. He is residing at 1300 S. 4th St., Leavenworth, Kans.

Oscar Ayres can be reached at 521 Koch Ave., Cape Girardeau, Missouri.

Wm. E. Simpkin gives his address as 10 Sierra Bonita Pl., Pasadena, Calif.

Clarice Myers, Jr. has recently accepted a job as Assistant Quarry Supt. for the Kosmos Portland Cement Co. of Kosmosdale, Ky. His address is Oolite, Ky.

Lem Gager gives his address as Box 205, Industrial YMCA, Bayonne, N. J.

George Ramsey was a campus visitor on August 13. George and his wife Marrily are again the proud parents of a son, Roger Hamilton Ramsey, born May 19, 1951. This is their second boy. George is with the Carter Oil Research Lab. at Tulsa, Okla.

Terrell C. Claunch's mailing address is 1226-8th Ave., Beaver Falls, Pa.

1949

Guy Serafini, Jr. is now employed by the Filter and Injector Co., 1001 S. Broadway Ave., Springfield, Mo.

Kenneth F. Peterson can be reached at 5854 Via Corona, Los Angeles, Calif.

Elmer C. Hill is employed in the Development Laboratory of the General Electric Co. in Schenectady, N. Y. Elmer resides at 2558 First Ave., Schenectady 10, N. Y. Elmer was a campus visitor on August 27.

Rex G. Goddard gives his address as 7143 Linden, Houston, Texas.

Hugh S. Hutton, Jr., who is employed as a Hydraulic Engr., Water Resources, U.S.G.S., 1004 New Federal Bldg., St. Louis 1, Mo., is living at 7322 Marietta Ave., St. Louis, Mo.

Alfons F. Uriwal can be reached by writing 4826 Fernwood Ave., Detroit, Mich.

Kurt H. Frank is an operating engineer for Monsanto Chemical Company's John F. Queeny Plant in St. Louis, Mo.

Luther R. Steele will receive mail sent to 1856 E. Walnut St., Springfield, Mo.

William H. Coolidge, who is employed with Ralston Purina Co. in St. Louis, Mo., gives his mailing address as 4557 West Pine, St. Louis, Mo.

Chester H. Burris is living at 541 South Middle, Cape Girardeau, Missouri.

James G. Clifton visited the campus on August 31, 1951. James has been employed by Ford Bacon and Davis Incorporated since graduation. He has been working on pipe line construction and has been stationed in Detroit for some time. He is soon to be transferred to Hartford, Conn. where he can be reached c/o Ford Bacon and Davis Incorporated, 601 Conn. Blvd., E. Hartford, Conn.

George Sessen's mailing address is 8913 Wrenwood, St. Louis, Mo.

Francis J. Herzog has become a member of the plant engineering section of Monsanto Chemical Company's William G. Krummrich plant at Monsanto, Ill.

Leonard Carl Nelson's mailing address is 52 Upland Rd., Sharon, Mass.

James J. Bissell gives his business address as Bissell Auto and Body Co., St. Louis, Mo. His mailing address is 3670a Shaw Blvd., St. Louis, Mo.

Charles E. Eichelberger writes that he is employed by Union Electric at the Osage Power Plant at Bagnell Dam, Mo.

Robert L. Root is studying for his M.S. degree in Geology at University of Utah. His address is 71 South 12th St., East, Salt Lake City 2, Utah.

Norman Fanning is employed by the Tennessee Coal Iron and Railroad Company of Birmingham, Ala. in the Coal Mines Washing Department. His work is in the field of coal treatment. His residential address is 1005 12th St., Fairfield Highlands, Fairfield, Ala.

1950

Douglas F. Middleton is in the army. His address is Pvt. Douglas F. Middleton, US-55027826, ERDL Hq. Bn., 9829 TL TSU-CE TECR, Bldg. 208, Ft. Belvoir, Virginia.

Clarence A. Isbell is employed with the Risdon Mfg. Co., Arch St., Naugatuck, Conn. His residence is 17 Cedar St., Naugatuck, Conn.

Trevor W. W. Hill is pursuing graduate study in the department of mineral engineering, School of Mineral Industries, Pennsylvania

Alumni Personals

State College, State College, Pa. Trevor holds a graduate assistantship in the department mentioned, and expects to receive his M.S. degree in June, 1952.

Robert G. Fleming is with the Joyce Bros. Construction Company, Wampum, Pa. His home address is 704 6th St., Ellwood City, Pennsylvania.

Bill L. Gabelmann's present address is 1004 E. Fisher, Pampa, Texas.

James DiGiorgio is working at McDonnell Aircraft Company on Guided Missiles in Thermodynamics and Aerodynamics. James was on the campus September 1, and gave his address as 423 Tiffin Ave., Ferguson, Mo.

Edward M. Chandler is employed by Battelle Memorial Institute, 505 King Avenue, Columbus, Ohio, as a research engineer in the instrument laboratory. His residential address is 91 East Como Ave., Columbus 2, Ohio.

Harve P. Nelson has finished work for his Ph. D. degree and has accepted the position of Associate Professor of Mining at Mackay School of Mines, Reno, Nev.

Paul Arnold Huber, 1360 Market St., Ste. Genevieve, Mo., is Assistant Mechanical Engineer, Mississippi Lime Company, Ste. Genevieve, Mo.

Stuart S. Brown gives his new address as 725 4th St., Oakmont, Pennsylvania.

Milton R. Skinner has recently accepted employment with the Southwestern Bell Telephone Company in St. Louis, Mo. Milton's mailing address is 3862 Arsenal, St. Louis, Mo.

Lewis E. Agnew, Jr., can be found at 1135 Tenth St., Apt. No. 7, Los Alamos, New Mexico.

Elmer W. Friske is living at 1213 Dakota, Fresno 4, Calif.

Murel L. Payne has recently accepted a job with the Civil Aeronautics Administration City Hall 559-3, Kansas City 6, Mo.

Bruce Frank Miller gives his address as 213 W. Dartmouth Rd., Kansas City, Mo.

Raymond T. Ruenheck writes that his new address is 1115 Dunford Dr., St. Louis 15, Mo.

Kenneth H. Yochum is now employed by the North American Aviation Company of Downey, Calif. Ken is residing at 942 E. 2nd St., Long Beach 2, Calif.

James A. Calhoun will receive mail addressed c/o Mrs. Eulah Allen, 1157 O'Hara, Jefferson Barracks, St. Louis, Mo.

Robert Wm. Schneider's address is General Delivery, Vandalia, Ill.

Marvin Emmett Smith is employed with Mead Johnson and Company, Evansville, Ind.

Alfred D. Vores is employed with the U.S.G.S. in Rolla, Mo.

Ismail H. Arman is a graduate student at Petroleum Engineering School, University of Oklahoma, Norman, Okla.

Everett W. Thrall is an Engineer for Phillips Petroleum Company. His address is 337 Circle Drive, Odessa, Texas.

Frank M. Yeckl is employed with the U. S. G. S. in Rolla, Mo.

Arthur L. Franks, 839 North Main St., Rockford, Ill., is working with Barber Colman Company.

Franklin W. Wyatt, who is with Carbide and Carbon Chemical Company, is living at 110 Decatur Road, Oak Ridge, Tenn.

Edwin H. Barsachs gives his home address as 7105½ Concord Dallas, Texas. He is employed with The Atlantic Refining Company, Dallas, Texas.

John R. McNichols is Sales Representative for Latrobe Electric Steel Co. His mailing address is 504 West Ash St., Piqua, Ohio.

George R. Smith gives his mailing address as 9093 North Avenue, St. Louis 21, Mo. He is employed with White-Rodgers Elec. Co.

William J. Edwards, who is with MacDonnell Air Craft Corp., gives his address as 6514 Lansdowne, St. Louis, Mo.

Karl H. Del Porte is in the Army and is stationed at Ft. Belvoir, Va. He will receive mail addressed to his home address at 445 Alice Ave., Kirkwood 22, Mo.

Herbert Cain is superintendent of construction for the Cities Service Gas Co. at a gas compressor station which the company is building at Pierce City, Mo. He may be addressed at Cities Service Gas Company, Box 411, Pierce City, Mo.

Karl H. Dunn writes that his new address is 2641 Yale Blvd., Springfield, Ill. Karl is employed

with the Illinois Division of Highways.

Nick J. Hurley, who interrupted a number of years with St. Joe Lead Company in Argentina and with the Aramayo Company in Bolivia to come to the States and take his last collegiate year with the class of 1950, has returned again to this country. He may be reached at 1510 Mathews St., Ft. Collins, Colo.

James T. Shearon has joined the U. S. Air Force as an Aviation Cadet. He may be addressed as Cadet James T. Shearon, Cadet P. O. Box 115, Vance Air Force Base, Enid, Okla.

Richard E. Schwab has resigned from his job with Missouri State Hwy. Dept. and has accepted employment with Howard, Needles, Tammen and Bergendoff at that Company's Kansas City office. Dick's mailing address remains as 619 W. High St., Jefferson City, Missouri.

Ray B. Johnson has accepted appointment as instructor in Civil Engineering at the College of Engineering, University of Ark., Fayetteville, Ark.

1951

Chester E. Neal was a campus visitor on August 21, 1951. His home address is 1914 New Madrid, Cape Girardeau, Mo.

Paul McIlroy, Jr. is living at Metaline Falls, Wash.

Thomas C. Browne gives his permanent address as Alexandria, Pennsylvania.

Robert O. Tuegel is employed by the Wagner Electric Corporation in St. Louis, Mo. Robert's home address is 7407 Balfour Drive, Overland 14, Mo.

Donald A. Cohen, who is employed by the Anaconda Copper Mining Company, Butte, Montana, may be contacted at 303 West Copper, Butte, Montana.

George Herbert Greig gives his mailing address as the St. Joe Club, Bonne Terre, Mo. Herb is working for the St. Joe Lead Company, Bonne Terre, Mo.

Truman E. McClard may be contacted at 210 W. Cherokee St., Nowata, Okla. He is employed by the Sinclair Oil & Gas Company, Tulsa, Okla.

Ali Kirkagaclioglu received his M.S. degree from Oklahoma A & M in August. He has just taken a one month tour of the United

Alumni Personals

States before returning to Turkey where he will be employed by the American firm of Stone and Webster Construction Engineers in Turkey working on dam construction. His home address is Y. S. Necati Bey Cad., Baykal Apt. D 3, Ankara, Turkey.

Eugene P. Watson gives his address as 3617 Watson Rd., St. Louis 9, Mo.

Mreville E. Doyle, Jr. has just become a member of the plant development department of Monsanto Chemical Company's William G. Krummrich plant at Monsanto, Ill.

Ralph G. Stuve gives his address as 607 West 12th St., Silver City, New Mexico.

Edwin J. Soxman writes that his new address is Box 117, Alfred, New York.

Stavro Theodorides is working with Surgent and Lundy, Power Plant Designers, Chicago, Illinois. Steve's residence is at 8232 Ingleside, Chicago 19, Ill.

Leland F. Belew can be reached at 914 Hawthorne, West Lawn, Huntsville, Ala.

Donald D. Montgomery has become a member of the maintenance and construction department of Monsanto Chemical Company's William G. Krummrich plant at Monsanto, Ill.

William Arthur Rehm gives his present address as 1334 Lathrop Ave., River Forest, Ill.

Marvin C. Zeid is now with the Atlantic Refining Company as a Production Engineer-Trainee. Marvin is residing at 213½ North First St., Longview, Texas.

Herbert L. Bowkley gives his address as 39 Linden Ave., Metuchen, N. J.

Robert Heetfield, whose home address is 5740 Cabanne Ave., St. Louis, Mo., is working for the Chevrolet Shell Company, 4801 Riverview Drive, St. Louis, Mo.

Raymond M. Kline's mailing address is 223 Welch, Ames, Iowa.

Charles F. Lehmann is employed by the Creole Petroleum Corporation, Caripito, Venezuela, South America. He may be addressed as Charles F. Lehmann,

c/o Creole Petroleum Corporation, P. E. Department, Caripito, Venezuela, S. A.

Owen Ayres will receive mail addressed to 415 Roosevelt Ave., Eau Claire, Wisc.

Herman A. Fritschen's address is 8729 Granada Place, Jennings 21, Mo.

Thomas E. Walsh is employed by J. C. Miller Oil Company, Rugby Building, Owensboro, Kentucky. He may be addressed at 49 Arthur St., Yonkers, N. Y.

Edward W. Cawthorne gives his mailing address as 295 E. 17th Ave., Columbus, Ohio. Edward is with the Battelle Memorial Institute.

John S. Connolly can be reached at 8122 E. Third, Downey, Calif.

William Z. Wenneborg is employed by the Union Pacific Coal Company at Rock Springs, Wyo. Bill's mailing address is Apt. No. 3, 432 Walnut, Rock Springs, Wyo.

William Hawkins' mailing address is 3168 N. 14th St., St. Louis, Mo. He is working for the Lindberg Steel Treating Company, 650 East Taylor Ave., St. Louis, Mo.

Frank B. Stevenson is working in the Exploration Department of the Kennecott Copper Corporation's mine at Ruth, Nevada. Since Frank expects to be moved around some, his mail should be sent c/o P. O. Box 554, Rolla, Mo. It will be forwarded from the Rolla Post Office to him.

Harry W. Smith is working as a Ceramic Engr. for the Walsh Refractories Corp., 101 Ferry Street, St. Louis, Mo. His residential address is 9825 Eastbrook Drive, Overland, Mo.

Eldridge S. Middour is employed as a micropaleontologist for the Atlantic Refining Company at Houston, Tex. His residential address is 4102 Villanova, Houston 5, Texas.

Donald W. Maltzahn is employed by the U. S. Vanadium Company at its Uravan, Colorado mine. His mailing address is Box 22, Uravan, Colorado.

Milton O. Sobie is at Quantico, Virginia taking special training with the U. S. Marine Corps. He may be addressed as Second Lt. Milton O. Sobie, 055026, U.S.M.C. R., 3rd Platoon "F" Company, 10th Special Basic Course, Special Training Regiment, Quantico, Va.

Los Angeles Section

The Los Angeles Section held a very enjoyable meeting Saturday evening September 8 at the home of "Cy" Young ('17) in Eagle Rock. Highlight of the evening was a fried chicken dinner prepared by "Cy" and Mrs. Young. All present can testify to "Cy's" ability as a chicken fryer of the highest order. Entertainment was furnished by Bannon Terrell (ex '28), his banjo, and Mrs. Terrell as vocalist. Toward the end of the evening Barney Nuell ('21) unlimbered his violin and introduced another of his talents to the Section.

The following were present:

Mr. and Mrs. Dave Anderson, '51, Mr. and Mrs. Hugh Barclay, '37, Ray Bever, '49, Mr. and Mrs. Bill Coleman, '49, Mr. and Mrs. Keith Cook, '42, Mr. and Mrs. Jack Fleischle, '43.

Mr. and Mrs. Bill Griffin, '51, Mr. and Mrs. Paul Halasey, '28, Mr. and Mrs. Jim Heddell, '41, Mr. and Mrs. Al Henke, '47, Mr. and Mrs. S. E. Hollister, '13, Mr. and Mrs.

Wayne Huff, '51, Mr. and Mrs. Dan Huffman, '21.

Mr. and Mrs. Don Jaenecke, '43, Mr. and Mrs. Nat Lawrence, '16, Mr. and Mrs. John Mosely '32, Mr. and Mrs. Barney Nuell, '21, Mr. and Mrs. Ken Sheckler, '37, Mr. and Mrs. Bannon Terrell, ex '28, Mr. and Mrs. Joe Wink, '42, Mr. and Mrs. "Cy" Young, '17.

Michael A. Scheriff, '41, and Mrs. Scheriff are the parents of twin boys born August 18, 1951. The boys were named Michael Aloysius and Martin James. The Scheriffs live at Deming, New Mexico. They can be reached by writing Box 613, Deming.

What's the News?

Please write
personals about
yourself or
other MSM men
for inclusion
in the Alumnus.

"Pat" Cummins Reported Improving Satisfactorily

Robert Patrick Cummins, '05, who is superintendent of equipment, Missouri State Highway Dept., State Highway Building, Jefferson City, Missouri, underwent an operation at St. Mary's Hospital in Jefferson City, September 12, 1951. At last reports he was recuperating satisfactorily. His home address is 1606B Jefferson Heights Apts., Jefferson City, Mo.

"Pat", who is past president of the Alumni Association and also past president of Missouri Society for Professional Engineers, is well known by the older alumni and by many of the younger alumni who have been associated with the Missouri Society of Professional Engineers.

Walter H. Braun, '33, and Mrs. Braun are the parents of a boy, Stephen Joel, born August 23, 1951. Walter gives his address as 906 Northampton Drive, Silver Spring, Maryland.



Charles H. Kemper of Troy, Missouri, giving the annual address at the Parents' Day Banquet at Missouri School of Mines and Metallurgy on October 6. At the speaker's right are Dean Curtis L. Wilson and Associate Dean R. Z. Williams. Others from left to right at the head table are: Professor S. H. Lloyd, Head of the Humanities Department; Dr. O. R. Grawe, Head of the Geology Department; Mrs. H. Q. Fuller, Mrs. I. H. Lovett, Professor J. B. Butler, Head of the Civil Engineering Department; Mrs. Paul G. Herold, Dr. A. J. Miles, Head of the Mechanical Engineering Department; Mrs. A. W. Schlechten, Dr. W. T. Schrenk, Head of the Chemistry Department; Mrs. J. D. Forrester, Mrs. Curtis L. Wilson, Dr. J. D. Forrester, Head of the Mining Department; Mrs. R. Z. Williams and Dr. A. W. Schlechten, Head of the Metallurgy Department. The Banquet climaxed the annual Parents' Day program at the school with about 500 parents in attendance. The morning was spent in visiting the classrooms and laboratories. In the afternoon the parents witnessed the football game between the Warrensburg Mules and the Miners—won by the Miners by a score of 12 to 6.